

What is claimed is:

1. A method of processing polished rice to obtain no-bran rice comprising the steps of:

- (a) adding moisture to the polished rice to soften grain surfaces thereof;
- (b) mixing and stirring starchy granular material heated to have temperature not less than 60°C with the moistened polished rice so that bran stuck on the grain surfaces of the polished rice is captured by the starchy granular material and removed; and
- (c) separating the polished rice from the starchy granular material with bran captured, and smoothing the grain surfaces by eliminating minute inequalities thereof after the bran removed so as to enhance brilliance of the grain surfaces.

2. A method of processing polished rice according to claim 1, wherein said starchy granular material has granularity of 0.5mm-1.7mm.

3. A method of processing polished rice according to claim 1, wherein said starchy granular material has moisture not higher than 5% in weight.

4. A method of processing polished rice according to claim 1, wherein said starchy granular material is selected from the group consisting of grinded wheat, grinded barleycorn, grinded millet, grinded buckwheat and grinded kaoliang.

5. A method of processing polished rice according to claim 1, wherein said starchy granular material comprises pearl tapioca.

6. A method of processing polished rice according to claim 1,

wherein said step (c) is performed under pressure in a range between 40gf/cm² and 100gf/cm².

7. An apparatus for processing polished rice comprising:

moisture adding means for adding moisture to the polished rice to soften grain surfaces thereof;

mixing/stirring means for mixing and stirring starchy granular material heated to have temperature not less than 60°C with the polished rice moistened by said moisture adding means so that bran stuck on the grain surfaces of the polished rice is captured by the starchy granular material and removed; and

separating/smoothing means for separating the polished rice from the starchy granular material with bran captured, and smoothing the grain surfaces of the polished rice by eliminating minute inequalities of the grain surfaces after the bran removed so as to enhance brilliance of the grain surfaces.

8. An apparatus for processing polished rice according to claim 7, wherein

said moisture adding means includes a screw cylinder arranged horizontally, a screw shaft rotatably arranged in the screw cylinder and having stirring vanes, and a spray nozzle for spraying water to material polished rice,

said mixing/stirring means includes a cylindrical casing arranged horizontally, a first hollow stirring shaft arranged rotatably in the cylindrical casing and having stirring slats, and a granular material supplying device for supplying the starchy granular material into the cylindrical casing through the hollow stirring shaft,

said separating/smoothing means includes a porous wall cylinder arranged horizontally, a second hollow stirring shaft supported rotatably in the porous wall cylinder and having stirring slats, and an air blowing device for blowing air into the porous wall cylinder through the hollow stirring shaft.

9. An apparatus for processing polished rice according to claim 8, wherein said mixing/stirring means and said separating/smoothing means are connected coaxially by aligning said cylindrical casing and said porous wall cylinder and joining said first hollow stirring shaft and said second hollow stirring shaft to extend coaxially as a unit.

10. An apparatus for processing polished rice according to claim 9, wherein said separating/smoothing means has a grain discharge device at a distal end portion thereof, and a resistance device is provided at the grain discharge device for adjusting pressure in the porous wall cylinder.

11. An apparatus for processing polished rice according to claim 10, wherein the pressure in the porous wall cylinder is set to 40gf/cm^2 to 100gf/cm^2 .